Remarks

Each of the cited references has been reviewed and the rejections made to the claims have been considered.

The specification is amended to remove an extra word ("in") from the title.

Replacement drawing sheets are submitted for all drawings to correct several typo errors.

Objection to claims 1, 15-17, and 20-22 is overcome by amendment

Amended claims 1, 15, and 20 overcome the examiner's objection by adding the definition of OFDM to the claims. The definition of OFDM is supported by the original disclosure. (Published application page 2, paragraph 0017) Claims 16-17 and 21-22 incorporate the definition of the respective base claims and thus are no longer objectionable.

Claim 1 is patentable over Kaneko in view of Golding.

Claim 1 was rejected under 35 USC §103 as being unpatentable over Kaneko in view of Golding.

Claim 1 is directed to an overlay signal of OFDM modulated digital data that is combined with a standard composite video television signal.

Kaneko, U.S. Pat. No. 6,009,073 discloses an orthogonal frequency division multiplex (OFDM) transmitter and receiver. The examiner's office action, page 3, states, "Kaneko discloses synchronizing the

digital signal with the sync signal from the clock frequency divider 22, fig. 7." The clock frequency divider 22 in fig. 7 of Kaneko is a divider circuit that divides the intermediate frequency (IF) used for the modulating unit 74 to generate a clock for the data. The IF has no relation to a video sync signal; Kaneko does not disclose a video signal at all. Thus, Kaneko does not disclose synchronizing the digital signal with the video sync signal, because Kaneko does not utilize a video sync signal. There is no suggestion in Kaneko to combine the disclosed data modulation with a video signal or to employ a video sync signal.

The examiner states "it would have been obvious to those skilled in the art to modify the system of Kaneko to provide sync signals from the input video signal in order to better synchronize the input signal with the data input from other sources, such as audio data."

The applicant respectfully disagrees with this conclusion by the examiner. MPEP section 2143.01. Kaneko discloses only an ODFM transmission system; there is no disclosure in Kaneko of video signals or overlaying digital data onto an analog video signal. There is no suggestion in Kaneko to combine the disclosed ODFM technique with another signal, nor to utilize synchronization. The technique of synchronizing two signals, namely synchronizing data to a video signal, is not addressed in Kaneko because Kaneko deals with only a data signal.

Golding, U.S. Oat. No. 3,795,763 discloses a transmission system for transmitting television signals digitally with data compression to reduce bandwidth. In Golding, the sync signal is extracted from the analog video signal in order to synchronize the transmission of digitized video data extracted from the same analog video signal. No external independent signal is combined with the transmitted

video signal. There is no suggestion in Golding to combine the disclosed compression and transmission technique with OFDM modulated data originating from another data source.

The examiner's office action states "Golding further discloses combining the Y component of the composite signal with the modulated I & Q signals as shown in fig. 1 according to the sync signal generated from the sync word generator 86. Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Kaneko by providing the disclosure of Golding where the modulated analog signal is combined with the Y component of the composite signal so that reduce[d] transmission bit rate and bandwidth is obtained." The I and Q signals shown in Golding are the I and Q components of the quadrature amplitude modulated (QAM) color video signal; these signals are standard components of an NTSC composite color video signal.

In contrast, the I and Q signals of the applicant's invention are the in-phase and quadrature-phase signals of the digitally modulated independent data stream that is overlaid onto the analog composite video signal. While NTSC video uses analog QAM to modulate color video information, it is a different process and unrelated to the digital QAM used as part of the OFDM modulation process. The I and Q signals of Golding are different from the I and Q signals of the present application, even though the names are the same. The digital I and Q signals of the present application are additional signals not present in a standard NTSC video signal.

The applicant's invention, and the claims of the present application, is not directed to reducing bandwidth of either the base video signal or the overlaid digital data, but instead is

directed at combining an un-modified video signal with ODFM modulated data from an independent source.

Claim 1 is not obvious when considering Kaneko in view of Golding. Neither Kaneko nor Golding suggests combining OFDM digital modulation techniques with analog composite video signal techniques, and neither reference suggests combining a composite video signal with an independent data signal modulated using OFDM. One aspect of novelty in the present invention is the combination of a digital signal with an analog video signal. Neither reference deals with combining signals from two sources, thus there is no motivation to combine the references. Further, the claim limitations of "obtaining sync pulse information from the composite video signal" is followed by "combining" "according to the obtained sync pulse information"; the latter limitation is an element that is not present in either Kaneko or Golding.

MPEP section 2143.01 reads:
FACT THAT THE CLAIMED INVENTION IS WITHIN THE CAPABILITIES OF ONE OF ORDINARY SKILL IN THE ART IS NOT SUFFICIENT BY ITSELF TO ESTABLISH PRIMA FACIE OBVIOUSNESS A statement that modifications of the prior art to meet the claimed invention would have been " 'well within the ordinary skill of the art at the time the claimed invention was made' " because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references. Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). See also In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000) (Court reversed obviousness rejection involving technologically simple concept because there was no finding as to the principle or specific understanding within the knowledge of a

skilled artisan that would have motivated the skilled artisan to make the claimed invention); Al-Site Corp. v. VSI Int'l Inc., 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999) (The level of skill in the art cannot be relied upon to provide the suggestion to combine references.)

In view of the foregoing, claim 1 is in condition for allowance and such action is respectfully requested.

Dependent claims 2-14 are allowable in light of claim 1 being allowable.

In light of the arguments above overcoming the rejection of claim 1, dependent claims 2-14 are allowable.

Claim 15 is patentable over Kaneko in view of Golding.

The examiner rejected claim 15 on the same grounds as claim 1. In view of the arguments overcoming the rejection of claim 1, claim 15 is allowable also.

Dependent claims 18-20 are allowable in light of claim 15 being allowable.

In light of the arguments above overcoming the rejection of claim 15, dependent claims 18-20 are allowable.

Claim 20 is patentable over Kaneko in view of Golding.

The examiner rejected claim 20 on the same grounds as claim 1. In view of the arguments overcoming the rejection of claim 1, claim 20 is allowable also.

Dependent claims 22-24 are allowable in light of claim 20 being allowable.

In light of the arguments above overcoming the rejection of claim 20, dependent claims 22-24 are allowable.

Objected to claims 16, 17, and 21 are allowable in light of rejection of base claims being overcome.

The examiner considered claims 16, 17, and 21 allowable if rewritten in independent form. In light of the arguments above overcoming the rejection of the base claims, dependent claims 16, 17, and 21 are allowable in their original form.

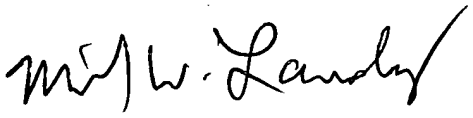
Conclusion

In view of the foregoing, claims 1 through 24 as amended are in condition for allowance and such action is respectfully requested.

If it is felt that direct communication would serve to advance prosecution of this case, the examiner is invited to call the attorney at the below listed telephone number.

Date: 10/14/2004

Respectfully submitted,



Michael W. Landry
Attorney for Applicants
Reg. No. 38,216
5098 Seachase St.
San Diego CA 92130
858-229-6801